

CLAIMS

What is claimed is:

1. A household dishwasher, comprising:

a housing defining wash chamber in which dishes can be stored for washing and the wash chamber having a peripheral edge defining an open face providing access to the wash chamber;

5 a door having an inner face and movably mounted to the housing for movement between a closed position, where the door is adjacent the peripheral edge to close the open face to block access to the wash chamber, and an opened position, where the door is remote from the open face to permit access to the wash chamber;

10 a liquid sprayer for spraying liquid into the wash chamber and comprising a pump and a spray arm fluidly connected to the pump such that the pump supplies liquid to the spray arm for spraying about the wash chamber;

a liquid-using washing accessory provided on the inner face of the door; and

a liquid delivery system for delivering liquid from at least one of an external supply and the wash chamber to the liquid-using washing accessory.

2. The household dishwasher according to claim 1, wherein the liquid delivery system comprises a liquid conduit comprising a first hose portion carried by the housing and fluidly coupled to one of the external supply and the wash chamber, a second hose portion carried by the door and fluidly coupled to the liquid-using washing accessory, and a transition portion fluidly coupling the first and second portions at an interface between the wash chamber and the door at least when the door is closed.

3. The household dishwasher according to claim 2, wherein the transition portion is a third hose portion fluidly connecting the first and second hose portions.

4. The household dishwasher according to claim 3, wherein at least one of the first, second, and third hose portions is extendable to accommodate any changes in 5 the hose length needed to move the door between the opened and closed positions.

5. The household dishwasher according to claim 4, wherein at least the third hose portion is extendable.

6. The household dishwasher according to claim 3, wherein the first, second, and third hose portions are integrally formed to define a one-piece liquid conduit.

7. The household dishwasher according to claim 6, wherein the one-piece liquid conduit comprises multiple discrete fluid passages to provide multiple discrete sources of liquid to the liquid-using washing accessory.

8. The household dishwasher according to claim 7, wherein the second hose portion is located within the interior of the door.

9. The household dishwasher according to claim 3, wherein the door is hingedly mounted to the housing for rotation about a hinge axis and the third hose portion extends between the first and second hose portions at the portion of the interface coinciding with the hinge axis.

10. The household dishwasher according to claim 9, wherein the door is hingedly mounted to the housing at a lower portion of the housing and the hinge axis is generally horizontal so that the door will pivot between a generally vertical position when the door is in the closed position and a generally horizontal position when the door
5 is open.

11. The household dishwasher according to claim 2, wherein the transition portion comprises a fluid coupling that fluidly couples the first and second hose portions when the door is in the closed position.

12. The household dishwasher according to claim 11, wherein the fluid coupling further comprises a valve to prevent the flow of water from the first hose portion to the second hose portion when the door is in the opened position.

13. The household dishwasher according to claim 12, wherein the fluid coupling further comprises a seal to fluidly seal the first and second hose portions when the door is in the closed position.

14. The household dishwasher according to claim 2, wherein the liquid delivery system further comprises a selectively-actuable, multiple outlet valve having one inlet connected to the external supply, one outlet connected to the wash chamber, and another outlet connected to the first hose portion to selectively control the supply of liquid from the external supply to either the wash chamber or first hose portion.

15. The household dishwasher according to claim 2, wherein the first and second hose portions comprise corresponding multiple liquid passageways and the liquid delivery system further comprises a selectively-actuable, multiple outlet valve having an inlet connected to the one of the external supply and the wash chamber, one outlet fluidly coupling one of the multiple passageways, and another outlet fluidly coupling another of the multiple passageways to selectively control the supply of liquid to the multiple passageways.

16. The household dishwasher according to claim 2, wherein the liquid-using wash accessory is a bulk wash aid dispenser.

17. A household dishwasher, comprising:
a housing defining a wash chamber in which dishes can be stored for washing and the wash chamber having a peripheral edge defining an open face providing access to the wash chamber;
5 a door having an inner face and movably mounted to the housing for movement between a closed position, where the door is adjacent the peripheral edge to close the open face to block access to the wash chamber, and an opened position, where the door is remote from the open face to permit access to the wash chamber;

10 a liquid sprayer for spraying liquid into the wash chamber and comprising a pump and a spray arm fluidly connected to the pump such that the pump supplies liquid to the spray arm for spraying about the wash chamber;

a bulk wash aid dispenser provided on the inner face of the door; and

a liquid delivery system for delivering liquid from at least one of an external supply and the wash chamber to the bulk wash aid dispenser.

18. The household dishwasher according to claim 17, wherein the liquid delivery system comprises:

a liquid conduit comprising a first hose portion carried by the housing and fluidly coupled to one of the external supply and the wash chamber,

5 a second hose portion carried by the door and fluidly coupled to the liquid-using washing accessory, and

a third hose portion fluidly coupling the first and second portions at an interface between the wash chamber and the door at least when the door is closed.

19. The household dishwasher according to claim 18, wherein the first, second, and third hose portions are integrally formed to define a one-piece liquid conduit.

20. The household dishwasher according to claim 19, wherein the one-piece liquid conduit comprises multiple discrete fluid passages to provide multiple discrete sources of liquid to the liquid-using washing accessory.

21. The household dishwasher according to claim 18, wherein at least one of the first, second, and third hose portions is extendable to accommodate any changes in the hose length needed to move the door between the opened and closed positions.

22. The household dishwasher according to claim 21, wherein the second hose portion is located within the interior of the door.

23. The household dishwasher according to claim 18, wherein the door is hingedly mounted to the housing for rotation about a hinge axis and the third hose portion extends between the first and second hose portions at the portion of the interface coinciding with the hinge axis.

25. The household dishwasher according to claim 24, wherein the door is hingedly mounted to the housing at a lower portion of the housing and the hinge axis is generally horizontal so that the door will pivot between a generally vertical position when the door is in the closed position and a generally horizontal position when the door
5 is open.

26. The household dishwasher according to claim 18, wherein the liquid-using wash accessory is a bulk wash aid dispenser.